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| 09/784,590      | 02/15/2001  | Rabindranath Dutta   | AUS920010034US1     | 5654             |

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| EXAMINER |
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BLACKWELL, JAMES H

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| ART UNIT | PAPER NUMBER |
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2176

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/784,590

Applicant(s)

DUTTA ET AL.

Examiner

James H Blackwell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This Office Action is in response to Amendment received 07/06/2004.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Independent claims 1, and 7 are directed to non-statutory subject matter. The claims are non-machine implemented methods requiring only manual or mental, human "parsing" of a document to identify one of, for example, two "tags" in the document and subsequent audible presentation of, e.g., "speaking" text at a level, e.g., whisper or loud based on the tag identified. The language of neither of these claims requires a transformation of physical subject matter into a different state or thing nor a practical application of an abstract idea that provides a useful, concrete, and tangible result.

Independent claims 39, and 40 of the claimed invention are directed to non-statutory subject matter because they are not limited to tangible embodiments. In view of the Applicant's disclosure, specification page 18, lines 18-31; page 19, lines 1-5, the claimed "computer readable media" is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., recordable-type media, such as a floppy disk, a hard disk drive, a RAM, CD-ROMS, DVD-ROMS) and intangible embodiments (e.g., transmission-type media, such as digital and analog communications links, wired or wireless communications). As such, the claims are not limited to statutory subject matter and are therefore non-statutory.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-33, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacKenty et al. (hereinafter MacKenty, U.S. Patent No. 6,085,161).

In regard to independent Claim 1 (and similarly independent Claims 7, 17, 23, 33, and 38-40), MacKenty teaches *receiving the document* in that the HTML document received from the browser utility, or some other utility program capable of providing HTML documents (Col. 4, lines 32-34; Fig. 1). MacKenty also teaches *parsing the document to identify a presence of a selected tag indicating an emphasis level, wherein text is associated with the selected tag* in that the received HTML documents are parsed into a tree data structure by the parser (12). MacKenty further teaches that in one embodiment, the parser (12) produces a tree data structure in which each node of the tree represents an HTML tag whose descendants constitute the portion of the document contained within that tag. In this embodiment, the attributes and values of each tag are attached to the node representing that tag. The parent node of each node represents the HTML tag that encloses the tag represented by that node. The child nodes of each node represent the HTML tags that are enclosed by the tag represented by that node. Character data, which is the textual part of the document between the HTML tags, are represented as leaf nodes of the tree. Character data can be split into

multiple nodes of the tree at sentence boundaries, and very long sentences may be further divided into multiple nodes to avoid having any single node containing a large amount of text. The parser (12) may store the tree data structure that it generates in a convenient memory element that is accessible by both the parser (12) and the reader (14). Alternatively, the parser (12) may communicate the tree data structure directly to the reader (14) (Col. 4, lines 33-57). MacKenty also teaches that *responsive to an identification of the presence of the selected tag, audibly presenting the text using the emphasis level prior to presenting other text within the document* in that when the reader (14) begins interpreting the tree structure representing the example HTML document, it instructs the sonification engine to produce a non-speech sound that represents the beginning of the body of the document, as marked by the body <BODY> tag. As the sound is played (or after it ends if the user prefers), the reader enqueues the text at the beginning of the document ("The Hypertext Markup Language ...") with the speech synthesis module. As soon as the word "Hypertext" is begun, the reader (14) enqueues the encountered hotlink tag with the sonification engine, causing the sonification engine to produce a sound indicating that the text currently being read aloud is a hotlink to another document, as marked by the <A> tag. In one embodiment, this sound continues to be heard until the end of the hotlink, as marked by the </A> tag, is read. Thus, the user will hear the sound representing the "hotlink" concept while the text of that hotlink is being read. The next phrase ("is a standard...") is read without any non-speech sound, as there is no markup assigning any special meaning to that text. The next phrase ("World Wide Web...") is read while the hotlink sound is again played,

because it is marked up as a hotlink. Similarly, the next sentence is read with the hotlink sound being produced whenever the text being read is within the <A> and </A> tags (Col. 7, lines 66-67; example HTML file; Col. 7, lines 43-56; Col. 8, lines 1-25). To summarize, MacKenty teaches that the reader begins interpreting the document once an HTML document has been obtained and parsed by the parser (Col. 4, lines 59-62). It then processes the document. When it encounters a tag, such as an indication of a hyperlink, it can present a non-speech sound, then the text contained within the hyperlink (e.g., <A href="">THIS TEXT</A> with speech synthesis, then another non-speech sound when it encounters the close hyperlink tag (</A>). Thus, *a tag is read prior to presenting other text within the document.* MacKenty does not explicitly teach *a bus system; a communications unit connected to the bus system; a memory connected to the bus system, wherein the memory includes a set of instructions; and a processing unit connected to the bus system.* However, MacKenty does teach that for embodiments in which the sonification engine is provided as a software module, the software module should be invoked using whatever means is provided by the operating system to do so (implies a computer or computer-like device to execute the software; the computer containing one or more of the claimed components). Alternatively, if the sonification engine is provided as firmware or hardware, then the engine can be activated using conventional techniques for communicating with hardware or firmware (communications unit), such as applying an electrical voltage to a signal line to indicate the existence of an interrupt request for service or by writing a predetermined data value to a register (memory). It would have been obvious to one of ordinary skill in the art at the time of

invention that MacKenty does provide descriptions and components that when combined in various ways would constitute a device for executing the method as claimed.

In regard to dependent Claims 2-4 (and similarly dependent Claims 14-16, 18-20, and 30-32), MacKenty teaches that *the document is a markup language document* and that *the markup language is one of a hypertext markup language document and a extensible markup language document* in that the present invention presents HTML documents to the user as a linear stream of audio information (Col. 1, lines 44-45; Fig. 1).

In regard to dependent Claim 5 (and similarly dependent Claim 21), MacKenty teaches that *the selected level of emphasis is selected based on a type for the selected tag* in that how the device (10) sonifies the HTML document depends on its configuration. In one embodiment, the configuration would represent most of the HTML markup using non-speech sounds, and the text using synthesized speech. More specifically, MacKenty implies that different sounds can be played when encountering different markup (e.g., a <BODY> tag could be represented with a low-frequency beep, while a hyperlink tag could be represented by a higher-frequency beep) (Col. 8, lines 1-25). Thus, based on how the user configures the system, different tag types can be represented with different sounds (levels of emphasis).

In regard to dependent Claim 6 (and similarly dependent Claim 13), MacKenty teaches that *the method is located in a web browser* in that the present invention works with a browser utility, that is, an application for visually displaying HTML documents, to

present HTML documents to computer users auditorially, instead of visually. It parses HTML documents, associates the markup and content with various elements of an auditory display, and uses a combination of machine-generated speech and non-speech sounds to represent the documents auditorially to a user (Col. 1, lines 60-67).

In regard to dependent Claim 8 (and similarly dependent Claim 24), MacKenty teaches that *the data structure is one of a list, a linked list, and a database* in that the parser produces a tree data structure in which each node of the tree represents an HTML tag (Col. 4, lines 38-41). The reader then accesses the tree data structure in order to sonify the page of HTML data that the tree data represents (Col. 4, lines 59-62).

In regard to dependent Claim 9 (and similarly dependent Claim 25), MacKenty teaches that *the set of text is at least one word* by way of example (see text between <A HREF></A> tags; Col. 7, lines 44-46).

In regard to dependent Claim 10 (and similarly dependent Claim 26), MacKenty teaches that *the emphasis level is at least one of a volume level and a type of intonation*. MacKenty implies that different sounds can be played when encountering different markup (e.g., a <BODY> tag could be represented with a low-frequency beep, while a hyperlink tag could be represented by a higher-frequency beep) (Col. 8, lines 1-25). Thus, based on how the user configures the system, different tag types can be represented with different sounds (types of intonations).

In regard to dependent Claim 11 (and similarly dependent Claim 27), MacKenty teaches, by way of example, that when the reader (14) begins interpreting the tree structure (*a data structure*) representing the example HTML document, it instructs the



sonification engine to produce a non-speech sound that represents the beginning of the body of the document, as marked by the body <BODY> tag. As the sound is played (or after it ends if the user prefers), the reader enqueues the text at the beginning of the document ("The Hypertext Markup Language ...") with the speech synthesis module. As soon as the word "Hypertext" is begun, the reader (14) enqueues the encountered hotlink tag with the sonification engine, causing the sonification engine to produce a sound indicating that the text currently being read aloud is a hotlink to another document, as marked by the <A> tag. In one embodiment, this sound continues to be heard until the end of the hotlink, as marked by the </A> tag, is read. Thus, the user will hear the sound representing the "hotlink" concept while the text of that hotlink is being read. The next phrase ("is a standard...") is read without any non-speech sound, as there is no markup assigning any special meaning to that text. The next phrase ("World Wide Web...") is read while the hotlink sound is again played, because it is marked up as a hotlink. Similarly, the next sentence is read with the hotlink sound being produced whenever the text being read is within the <A> and </A> tags (Col. 7, lines 66-67; example HTML file; Col. 7, lines 43-56; Col. 8, lines 1-25). To summarize, Mackenty teaches that the reader begins interpreting the document once an HTML document has been obtained and parsed by the parser (Col. 4, lines 59-62). It then processes the document. When it encounters a tag, such as an indication of a hyperlink, it can present a non-speech sound, then the text contained within the hyperlink (e.g., <A href="">THIS TEXT</A> with speech synthesis, then another non-speech sound when it encounters

the close hyperlink tag (</A>). Thus, *a tag is read prior to presenting other text within the document.*

In regard to dependent Claim 12 (and similarly dependent Claim 28), MacKenty teaches that *the text is presented audibly* in that synthetic speech is used to read the text content aloud, and non-speech sounds to represent features of the document indicated by the markup. For example, headings, lists, and hypertext links can each be represented by distinct non-speech sounds that inform the user that the speech they are hearing is part of a header, list or hypertext link, respectively (Col. 2, lines 1-7).

In regard to dependent Claim 41, MacKenty teaches that *said method identifies the presence of a plurality of tags having respective associated text and said respective associated text of all of said plurality of tags is presented prior to presenting other text within the document* in that in the processing of lines containing <HTML><BODY>The <A HREF=http://www.w3c.org/MarkUp/>Hypertext markup Language (HTML)</A> where the <BODY> tag has associated text "The" and the <A HREF> tag has associated with it the text "Hypertext markup Language (HTML)", which are presented in audible form before the remainder of the exemplary web page (Col. 7, lines 43-67; Col. 8, lines 1-16).

Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacKenty in view of Noguchi (U.S. Patent No. 5,983,184).

In regard to dependent Claim 34, MacKenty fails to explicitly teach that *the bus system is a single bus*. However, Noguchi teaches in Fig. 1 a single bus (2). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of MacKenty and Noguchi as both relate to audibly presenting data. Adding the teaching of Noguchi provides the benefit of more explicitly describing the system associated with MacKenty's invention.

In regard to dependent Claim 35, MacKenty fails to explicitly teach that *the bus system includes a primary bus and a secondary bus*. However, Noguchi teaches that the present invention can be implemented by a normal personal computer (PC), a workstation, or a combination of them (hence more than one bus) (Col. 8, lines 53-55). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of MacKenty and Noguchi as both relate to audibly presenting data. Adding the teaching of Noguchi provides the benefit of more explicitly describing the system associated with MacKenty's invention.

In regard to dependent Claim 36, MacKenty fails to explicitly teach that *the processing unit includes a plurality of processors*. However, Noguchi teaches that the present invention can be implemented by a normal personal computer (PC), a workstation, or a combination of them (hence more than one processor) (Col. 8, lines

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53-55). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of MacKenty and Noguchi as both relate to audibly presenting data. Adding the teaching of Noguchi provides the benefit of more explicitly describing the system associated with MacKenty's invention.

In regard to dependent Claim 37, MacKenty fails to explicitly teach that *the communications unit is one of a modem and Ethernet adapter*. However, Noguchi teaches that the present invention may be implemented as a client/server system wherein a client machine is connected by a LAN to a server machine via Ethernet or a token ring (Col. 9, lines 9-12). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of MacKenty and Noguchi as both relate to audibly presenting data. Adding the teaching of Noguchi provides the benefit of more explicitly describing the system associated with MacKenty's invention.

***Response to Arguments***

Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James H. Blackwell  
03/29/05

  
JOSEPH FEILD  
SUPERVISORY PATENT EXAMINER